

Commonwealth of Kentucky
Division for Air Quality
PERMIT STATEMENT OF BASIS

Final Conditional Major Operating

Permit: F-06-073 R1

RR Donnelley, Nielsen Plant

Florence, Kentucky 41042

Date: 08/31/07

Frough Sherwani, Reviewer

SOURCE ID: 21-015-00082

SOURCE A.I. #: 222

ACTIVITY ID: APE20070001

Revision 1 (Minor Revision):

On August 20, 2007 the Division received an application from the source for the minor revision to their conditional major permit F-06-012 for the following.

1. Name change from "The Nielsen Company" to "RR Donnelley, Nielsen Plant".
2. Adding a Emission Point # 14 (Press 1240, KBA Rapida, Sheetfeed Nonheatset, Offset Lithographic Printing Press, 12 printing units, 2 Coating Units, and UV Curing System)
3. Removing Emission Point # 07 (Komori 226 Sheetfeed) and Emission Point # 08 (Komori 626 Sheetfeed)

The current source wide emission allowables for VOC is 97 tons per rolling 12-month period, 9 and 22.5 tons per rolling 12-month period for a single and combined HAPs respectively. These allowables will remain the same.

SOURCE DESCRIPTION:

The Nielsen Company is in the commercial lithographic printing industry (SIC 2752, Commercial Printing, Lithographic) and is located in Boone county that is classified as an ozone nonattainment area pursuant to Regulation 401 KAR 51:010. The source produces printed papers with web and sheetfed presses. The activities at each press include use of inks and fountain solutions during production print runs and use of solvents during cleanup operations. Inks, solvents, and fountain solutions are the major raw materials that generate emissions of volatile organic compounds including low levels of hazardous air pollutants. There is no control on VOC emissions.

RENEWAL PERMIT

The source has applied to the Division for Air Quality for a renewal of their permit # F-01-018. This original Conditional Major Permit, issued in February 2002, was for the operation of six (6) web presses and five (5) sheetfed presses. The web presses use heatset inks and natural gas dryers. Permit# F-01-018 limited the source total VOC emissions to 90 tons per year, actual HAP emissions to 9.0 tons per year of any single HAP and 22.5 tons per year of any combination of HAPs. These annual limitations were not to be exceeded during any consecutive twelve (12) month period for the entire source.

For the renewal permit, the source is requesting the followings:

1. Change of the VOC emissions limit from 90 tons 12-month rolling average to 97 tons 12-month rolling average.
2. Removal of emission point 003, the 670 838 Hantscho web press. This press was removed from the site in late 2005.
3. Adding blanket washers to emission point 006, Mitsubishi 638 web press and point 0012, Man Roland 638 web press. The press has used hand washing with solvents and the source is going to install minor automatic blanket washers that will be used 75 % during cleaning operations.
4. In the permit's SECTION C – Insignificant Activities, replace the Miehle sheetfed press with an AB Dick 9810 press. This is an insignificant source, emitting less than 0.5 tons of VOC per year.

COMMENTS:

The 97 tons VOC emission limit requested by the source will be below major source threshold and will preclude the applicability of 401 KAR 51:052, Review of new sources in or impacting upon nonattainment areas. However, since 97 tons VOC emissions is very close to the NSR (New Source Review) major source limit of 100 tons per year, the source will need do more recordkeeping as detailed in SECTION D of the renewal permit# F-06-073.

The Conditional Major permit # F-06-073 will be for operation five (5) web presses (EMISSION POINTS 02, 04, 06, 12, AND 13) and to operate five (5) sheet fed presses (EMISSION POINTS 07, 08, 09, 10, AND 11) and will replace the pervious permit. The plant is classified as a Conditional Major source because it elected to have volatile organic compounds (VOCs) and hazardous air pollutants (HAP) emissions below major source.

EMISSION FACTORS:

AP-42

Engineering calculations

APPLICABLE REGULATION:

401 KAR 51:052, Review of new sources in or impacting upon nonattainment areas, applies to new major sources or major modifications commenced after September 22, 1982 located in a nonattainment area. This regulation has been determined by the Division to not be applicable due to limitations imposed on the source.

EMISSION AND OPERATING CAPS:

1. VOC emissions shall be less than 97 tons during any consecutive twelve (12) month period.
2. HAP emissions shall be less than or equal to 9.0 tons per year of any single HAP or 22.5 tons per year of any combination of HAPs. These annual limitations shall not exceed during any consecutive twelve (12) month period for the entire source.

Type of control and efficiency:

There are no control devices in place for this facility. According to the ACT for Offset Lithography (EPA, 1994a), it can be assumed that for heatset web presses 20 percent of ink VOC / HAP is retained in the substrate and for sheet fed presses 95 percent of the ink VOC is retained in the substrate.

Manual cleaning materials will have a vapor pressure below 10 mm Hg and will be stored in closed containers. Through these measures, a 50 percent retention factor is assumed for hand cleaning solutions. This emission prevention is based on the above EPA guidance.

PERIODIC MONITORING:

No monitoring is required for compliance with mass and opacity standards applicable to the presses since presses like these that are operated and maintained consistent with manufacturer recommendations will always comply with the limits.

Storage of wash solvents shall be monitored daily to verify that used and unused portions are in closed containers. This degree of monitoring should be a sufficient reminder to personnel of the operating limitation.

CREDIBLE EVIDENCE:

This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has only adopted the provisions of 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12 into its air quality regulations.